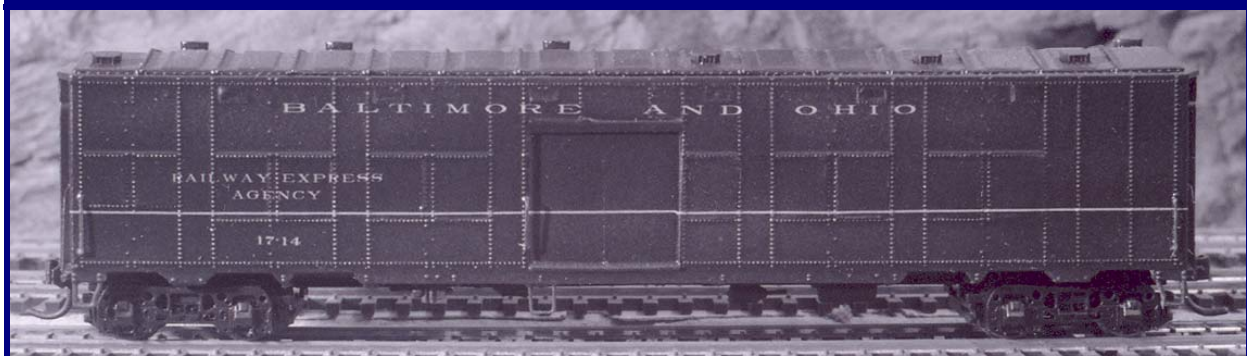


# ***THE B&O MODELER***

Volume 2, Number 2

MARCH/APRIL 2006



**HO NW-2 Switcher with Sound  
HO Walther Troop Sleeper C-17 Express Car Conversion  
O Scale Models at the Staunton Convention**

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Cover Photos – Top, NW2 - Tim Rasinski photo. Middle, C-17 – Greg M. Smith photo, Bottom, SF 43 - Edward F. Bommer photo.

## AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1600 members.

Members regularly receive a variety of publications offering news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source

material. Their purpose is to make otherwise unobtainable data available to the membership at reasonable cost.

Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of [annual memberships](#) are available. Regular memberships are only \$35.00. If you would like to join, click [here](#) to fill out our [membership application](#), print a copy and mail it to:

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Queen City Station in HO Scale, Wade Rice, Jr. Photograph of a Henry Freeman Model

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## NEWS FROM THE COMPANY STORE

BY GEORGE STANT

Why should you become a member of the Baltimore and Ohio Railroad Historical Society? Besides belonging to one of the finest railroad organizations in existence, you will also get some nice discounts on the multitude of items that we sell through our Company Store. For example as a Society member, you can save up to 20% on most books over the price we charge to the general public. And on our models, you can save from between 10% and 15%, more with some of the specials that we send out to members. The same goes for the more than 175 reprints of manuals, track plans, and other documents taken from B&O historical records. And remember the profits from these sales go directly back to the Society's ongoing preservation efforts.

While the bulk of the reprints that the Company Store stocks involves items that may be of more interest to the B&O historian, there are quite a few reprints that should be a great interest to the modeler. These reprints will be of great help to a modeler who has a nice layout at home or at a club and wants accurately detailed buildings and other structures that were used on the B&O. For this edition of B&O Modeler, we will review two reprints that should be of interest.

Stock number 72019 - B&O/ICC Valuation Type Book, circa 1919-1921. This is a document with specifications and sample drawings that provide a

wealth of information about the B&O. The reprint provides dimensions, sizes and number, materials utilized for construction of building foundations, roofs, flooring, interior finishes, heating, lighting, furnishings and structures.

Structure information includes that for outhouses; coal & scrap bins; fences; cattle chutes; signs; platforms & stairs; tool, bunk, sand, coal, oil, tool, freight & store houses; telegraph, yard & freight offices; barns; medical facilities; watch towers & boxes; telephone boxes; shelter sheds; freight, passenger & combination stations; water tanks & columns & pump houses; signal towers; covered shops buildings; engine houses (rectangular & radial); ash & engine house pits; dwellings; scales; and mail cranes. The reprint is 120 pages and retails for \$21.00.

Stock number 72020 BR & P/ ICC Valuation Building Type Book, circa 1918-1919. This reprint is similar to the B&O book just discussed but for the Buffalo, Rochester & Pittsburgh Railway. The reprint is 79 pages and retails for \$18.00.

You can order either of these reprints by visiting our web site at [www.borhs.org](http://www.borhs.org) and click the link on the left that says Company Store. Navigate to the section that says "Right of Way."

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## MODEL PRODUCT NEWS

EDITOR NEEDED

### 1 1/2" Scale M-53 Boxcar Kit

I saw this kit on January 21 at the "Cabin Fever Expo" at the York, PA fairgrounds. This is a "model engineering" show, where they sell stuff for serious model engineers—lathes, milling machines, other metalworking tools, sets of castings for model steam engines, etc. This show, held in "Memorial Hall," also included exhibits of hundreds of miniature Steam engines, beautiful and merrily spinning around powered by compressed air as well as a model boat tank in which radio controlled steamboats and submarines were cruising around in circles.

Here is the description from the promotional flyer:

"This 1 1/2" scale model is constructed as close as possible to the prototype with individual sheets, ribs,

rivets, etc. While the parts are numerous and it may look difficult, assembly is easily accomplished. All major components are supplied cut to size, punched and formed. This is a complete kit including all necessary hardware and decals, less trucks and couplers. You will only need to add your own paint, trucks, couplers and cuss words to complete this car."

A built up sample was not on display, but the kit box was. The box itself was the size of a coffin. In it were all the formed aluminum sheets and ribs, with thousands of holes punched in them. Rivets appeared to be brass escutcheon pins. I did not ask how these were actually affixed—perhaps you clip them off short from behind and peen them on the rear. I also forgot to ask if this kit included a Duryea underframe.



This kit was being sold by Larry Lahy, 6364 Congress Ct., Bensalem, PA 19020. No website was listed, but his e-mail is [lcmodels@prodigy.net](mailto:lcmodels@prodigy.net).

Price is \$1200, FOB Philadelphia.

Years ago my late friend Glen Craul had a fully operational Fairmont Speeder on his patio as an ornament and centerpiece. This 6' long boxcar could serve the same purpose.

However, I resisted and did not buy one. Perhaps if trucks and couplers had been included.....

*John Teichmoeller*

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## MODEL PRODUCT REVIEWS

### EDITOR NEEDED



#### **Athearn HO Scale B&O GP-35**

Although I model the 1950's, I have always had a "thing" for the EMD GP-35. To me, they look like what a freight diesel should—all business, with the muscle to do the job, and no frills. At any rate, up until now, if you wanted an accurate HO B&O GP-35, you had to roll your own starting with the rare Kato Phase 1a, which was released in March, 1992, and is out of production. No more, as Athearn has introduced a new HO Scale phase 1a GP-35, painted and lettered as Baltimore & Ohio 3507 and 3519.

This new model has nothing in common with the Athearn's old, wide-hood ca.-1960's GP-35 that we've all come to know and hate. Based on the former Rail Power Products shell, and with an up-to-date frame and mechanism, this unit is light-years beyond what Athearn used to offer. Part of their "Ready to Roll" line, the model comes assembled, with McHenry scale knuckle couplers, Celcon handrails, wire grab irons, hex drive lines, and "quick-plug" DCC technology.

According to Athearn's web site, the Phase 1a variant was offered from October of 1963 to February of 1964, and is distinguished by triple louvers on the battery box cover, open top 36" radiator center fan, a flat inertial air filter cover, and a thick side-sill. Two other aspects of this phase are the low-profile fuel tank, and the flat bottom cab number board housing. B&O's GP-35's were delivered in March and April of 1964 (#3500-3519), July of 1964 (#3540-3553), September of 1964 (3554-3559), and December of 1964 (3581). (It is not clear to me, why, if Phase 1a production ended in February, 1964, that the B&O units, delivered afterwards, were Phase 1a units. Perhaps the Athearn web site's Feb, 1964 date is a typo and the actual date is 1965?) This made for a total of 41 engines. Classed as "GP-35" by the railroad, these B-B units produced 2500 hp and 51,000 lbs of continuous tractive effort from a 16-567D3A diesel engine turning at 900 rpm at full load. This was the last hurrah for the 567 model diesel; the next production EMD's were powered by the model

645. Some GP-35's are apparently still in service on CSX as road slugs in the 2200 and 2300 series.



The model itself is very impressive right out of the box. Painted a very dark blue, with bright yellow lettering and stripes, the paint is smooth and has a semi-gloss sheen to it. Lots of little lettering is printed in appropriate locations on the model, including the EMD Builder's Plate, and a trust plate that states, "Ownership is subject to an agreement filed with the Interstate Commerce Commission." All of this lettering is legible, although you'll need a loupe to read it. Finally, the B&O emblems on the nose and rear of the units are the correct, 18" diameter, and the "B&O" on the flanks are sans serifs. With delivery of the SD-35's, beginning in July of 1964, the railroad changed to a larger B&O emblem, and added serifs to the "B" in "B&O" on the flanks. I believe the GP-35's delivered during this time (#3540-3559 and 3581) had the later style lettering. This is excellent that Athearn picked up on the lettering difference.



Other details on the model include see-through roof fans, with the fan blades highlighted with silver paint. The handrails are extremely thin, and have a scale-like appearance. They are molded in a blue to match the carbody, and do not have a "plastic" look about them. The end rails include a finely molded chain across the inside stanchions.



The side radiator and air filter openings are not see-through, but are blackened with a tarnished black color that gives the appearance of being see-through. Wire grabs have been installed throughout, and are mounted the proper distance from the body, and both vertically and horizontally straight. The footboards are finely molded and are see-through.



Unfortunately, there are some missing details that will have to be added by the modeler. This includes the lift rings (inexplicable since wire grabs were added), windshield wipers, and MU cables, MU stands, and Drop Steps. Missing from the walkways are tread detail, although this is not as noticeable as the missing lift rings, and is understandable given the vintage of the Rail Power molds. The air horn provided is a very nice metal (brass?) casting, but all three bells face forward. According to Jim Mischke, B&O Diesel Historian, the GP-35's were delivered with Leslie S3L air horns, with the center bell facing rearward. Finally, cab sunshades were not included, although (again, according to Jim), "Builder's photos of 3501 show a really big trapezoidal sunshade. Builder's photos of 3555 later in 1964 and most in service photos show a smaller shade, same runners, and same location, on both sides."

Also unfortunate is the choice of road-numbers; again, according to information Jim Mischke was kind enough to provide me, even-numbered GP-35's were equipped with radios with the antenna mounted on the nose (as were the B&O's GP-30's). By giving both engines offered odd numbers, Athearn has precluded the opportunity of modeling this unique B&O feature.

Running-wise, the model is very smooth, with low mechanism noise. Directional headlights are

included, but they do not light when the unit begins moving (5 volts), do come on dimly at 7 volts, and reach full brilliance at 8-9 volts. When lit, they are extremely bright and white, and give the appearance of being LED's. I did not attempt to pop off the body of my engines to look at the mechanism. I intend to detail my units with the following:

Details West

#AH-190 Leslie RSL-3L-R3 Chime Air Horn,  
Utah Pacific

#S-65 Axle Wheel Slip,

Detail Associates

#SS-1301 Cub Sunshade, SW/GP/SD,

#DS-1402 Drop Step, EMD Late GP/SD,

#1503 MU Stand, EMD Intermediate, single,

# MU-1508 MU Air Hoses,

#SY-2205 Coupler Lift Bar, Diesel Locomotive  
Type, formed brass wire,

#2206 Eye Bolts, 3 1/2" dia, wire formed,

MV Products

#LS-300 clear lenses, and

Windshield wipers made from 0.010" stainless steel  
wire.

All in all, this is a fine looking, well running rendition of the last of the 567 powered Geeps. Available now, ATH91705, B&O #3507, and ATH91706, B&O #3519 retail for \$84.98, with street prices in the range of \$49.99 to \$69.00.

*Greg LaRocca*



### **Accurail HO Scale B&O Class W-7b Hopper**

Accurail has recently released their 7500 series 70-ton Offset-Side Triple hoppers that are an A.A.R. design. The first production includes 13 road names plus undecorated, data only black and data only mineral red. In this run they have done Baltimore &

Ohio Class W-7b in thirteen different and correct numbers. The "Mid Fifties Billboard" style of lettering was used in 1956 and 1957. The reweigh date is KY 1-60. This can be easily back-dated a few years by painting out the "60" and using a decal to



change the year. The undecorated models could be used for back dating to other eras as well as classes W-7, W-7b, W-8 and W-9. For those wanting to change road numbers Accurail includes an order slip for decals that are available for twelve more numbers printed on car color paint that you just lay over top of existing car numbers. These twelve numbers are different from those that were on the 12 - Pack set of cars. So a B&O modeler could have a train of twenty five of these cars all with different numbers. These are also in the 624000 series and all correct!

The B&O acquired 2,000 of this type of all steel cars in 1948. Bethlehem Steel built cars were numbered

630,000 - 639,999 and Pressed Steel Car Co. built numbers 624,000 - 624,999 which is the series used by Accurail for their HO models. All cars used a B&O 51-W type truck and the model's trucks resemble photographs of the trucks used on the Pressed Steel Car Co. cars. These cars (but not the models) were equipped with Duryea underframes with double springs in front of the bolster and A.A.R. Z-26 centersills. This information was gleaned from the Class W-7b equipment diagram with revisions through April 6, 1949 (below). Richard K. Daniels, Freight Car Equipment Summary 1917 - 1960 indicates that in 1955, 1990 of this class remained and in 1960, 1980 were left.



Circa 1960 Bob Lorenz Collection Photograph, B&ORRHS Collection



Circa 1954 B&O Photograph, B&ORRHS Collection

The model assembles very easily with little use of cyanoacrylate cement. Accurail furnishes their brand of magnetically operated couplers. They are held in place with a short blackened self-threading screw so a Kadee coupler could readily be substituted. The sill steps are cast as part of the coupler pocket and are much finer than found on most plastic models. The AB brake parts have piping cast integral. These models have the end braces that support the slope sheets unlike many hopper car models. The weights on these hoppers are placed on top of the slope sheets and detailed plastic slope sheet parts cover them very nicely. Attaching the trucks with long screws finishes the assembly and holds all of the parts together. The completed car weighs 3 ounces. This is 3/4 oz. under NMRA recommended weight. Replacing the plastic wheels with metal should add enough weight to push it over the minimum.

While assembling this model I found a few little bits of mold flash on this otherwise perfect molding. On top of the slope sheets where the ejector pins touched there was a little flash that may prevent the weights from seating properly. This is easy to remove. If you look in the center of the center sill between the middle hoppers you will find the remains of the casting sprue. It hardly shows but if it bothers you, break it off with needle nose pliers, file smooth with a file and touch up with dull black paint as these bodies were cast using red plastic. One other little bit of mold flash is found on the end braces. Cut this off with a sprue cutter tool and finish with a file. Otherwise these parts will not seat into notches in the underside of the slope sheets.

Now for the real nitpicking, these cars do not have routing card boards! All railroad cars have some place where the clerks can tack on the destination cards. On these models it should be on each side at the left end near bottom edge of sill. It should measure 4"x 6"x 1" thick. Paint it black. Then cut a small piece of paper and cement onto it for a car tag. No dummy coal loads are included nor made for these cars yet. No underbody brake rods, levers, or a trainline. And there is no brake retainer valve on the B end either cast on or as a part to be added.

These models have roping staples at all four corners under the sill extensions but they are not open. You can open these by first drilling with a number 72 drill (.025") then use a number 67 (.032") to enlarge it. After looking at many photos of B&O hoppers I can not find that the B&O used these on many of their cars. So you can file these off and touch up the paint.

When comparing these models to the Stewart model of the same cars I would have to say these are much better. The invisible weight surely tips the scale towards the Accurail model. The Stewart models were painted and lettered for class W-7 and of an earlier era. I need both for my 1946 - 1956 era modeling.

The completed model weighs only 2-3/4 oz. as weighed on my 1968 vintage postal scale, so one additional ounce of weight should bring it up to the NMRA recommended weight of 3-3/4 oz. These hoppers are not very good rollers. Even reaming out the truck journals (bearings) with the "The Tool" did not improve their rolling characteristics. Adding metal wheels with metal axles may improve their



rolling quality as well as adding additional weight for better operation.

There are no cut levers furnished but there is a surface upon which to place them. There are plenty of things for the super-detailer to work on and add to

this kit such as simulating the Duryea underframe. But, the average modeler should be happy to build this very nicely detailed model kit just as it comes out of the box.

*Edwin C. Kirstatter, Model Photos by Bryan Porter*



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## UPDATES AND ERRATA

### **An Addition to the Carfloat Article in the January/February 2006 Issue**

John McCluskey has determined that the track spacing will, indeed, fit the Walther's float bridge when the turnout points on the apron are thrown for the "inner" position. The only potential problem I see with this is that you have an S-curve to deal with. The other issue is that the toggle pockets don't mate. This is also prototypical. I have seen photos of carfloats with multiple toggle pockets to fit various float bridge alignments. Modelers can scratchbuild more toggle pockets or try to obtain the beautiful pewter carfloat fittings set offered 10 years or so ago by Crow River Products. *John Teichmoeller*

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## HO NW-2 SWITCHER WITH SOUND

BY TIM RASINSKI

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



### Introduction

I model the B&O and several other railroads in east Baltimore in 1944. I have been collecting appropriate locomotives for the past ten years or so. Several years ago I purchased a Kato NW-2 undecorated with plans of painting and lettering it for the B&O whenever the need for motive power became necessary. It is fortunate that I put off the project because Broadway Limited Imports (BLI) recently came out with an NW2 with DCC and sound. Any of you who have tried, know getting DCC into a switcher is difficult enough and sound is almost impossible. The problem with the BLI NW2 is that it is a later phase of the NW2 with too many distinguishing features to stand in for the early NW2s. Fortunately, the Kato NW2 is an early phase. I decided that if I could take the mechanics of the BLI loco and put on the body of the Kato loco, I would be in business. The project was not too difficult and results in an early phase switcher with sound and DCC.

### The Prototype

The NW-2 switcher was very common on the B&O, and could be found almost anywhere on the system.

Acquiring 52 units directly from Electro-Motive in four orders during 1940, 1942, 1948 and 1949, B&O inherited 13 more from the C&O in 1973. Most lasted on the B&O until 1983-1985. This model represents a member of the initial order in 1940 for 9 switchers numbered 400-408 (later renumbered 9500-9508). These featured low stacks, a multistep hood transition in front of the cab, no louvers on the hood, segmented handrail sections attached to hood access doors, and no multiple unit capability.

There are three main features that distinguish the early NW-2 (Kato) from the later (BLI). The major feature is the narrow end of the hood. On the early phase the top tapered steeply and then flattened again before reaching the cab. On the later phases the taper was shallow and ended at the cab. On the early phase the gussets between the frame and step well were rounded. These were later replaced with straight, welded gussets. The last feature is the handrails on the forward and rear deck sides. The originals did not drop down below the sideframe to the step well.



Hicks Collection Negative #87



Broadway Limited Imports Photograph

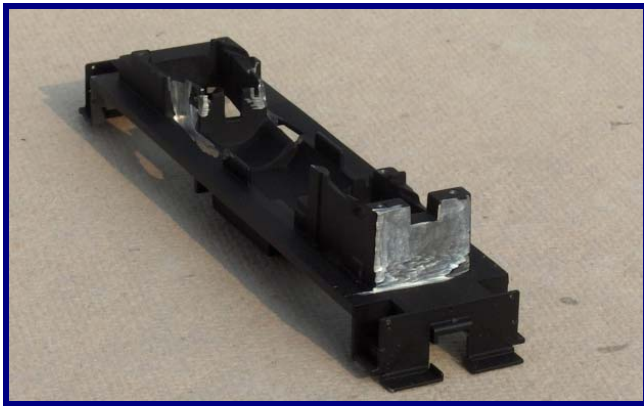
### The Model

The first step is to disassemble the two locomotives. There are tabs under the frames of each loco that allow the shells to pop off. The Kato was a real bear and took some pulling to get apart. The BLI came apart without too much trouble. Keep the loco parts separated. Handle the circuit board from the BLI sparingly. I do not know if it is prone to damage from static, but it is best to treat it that way.

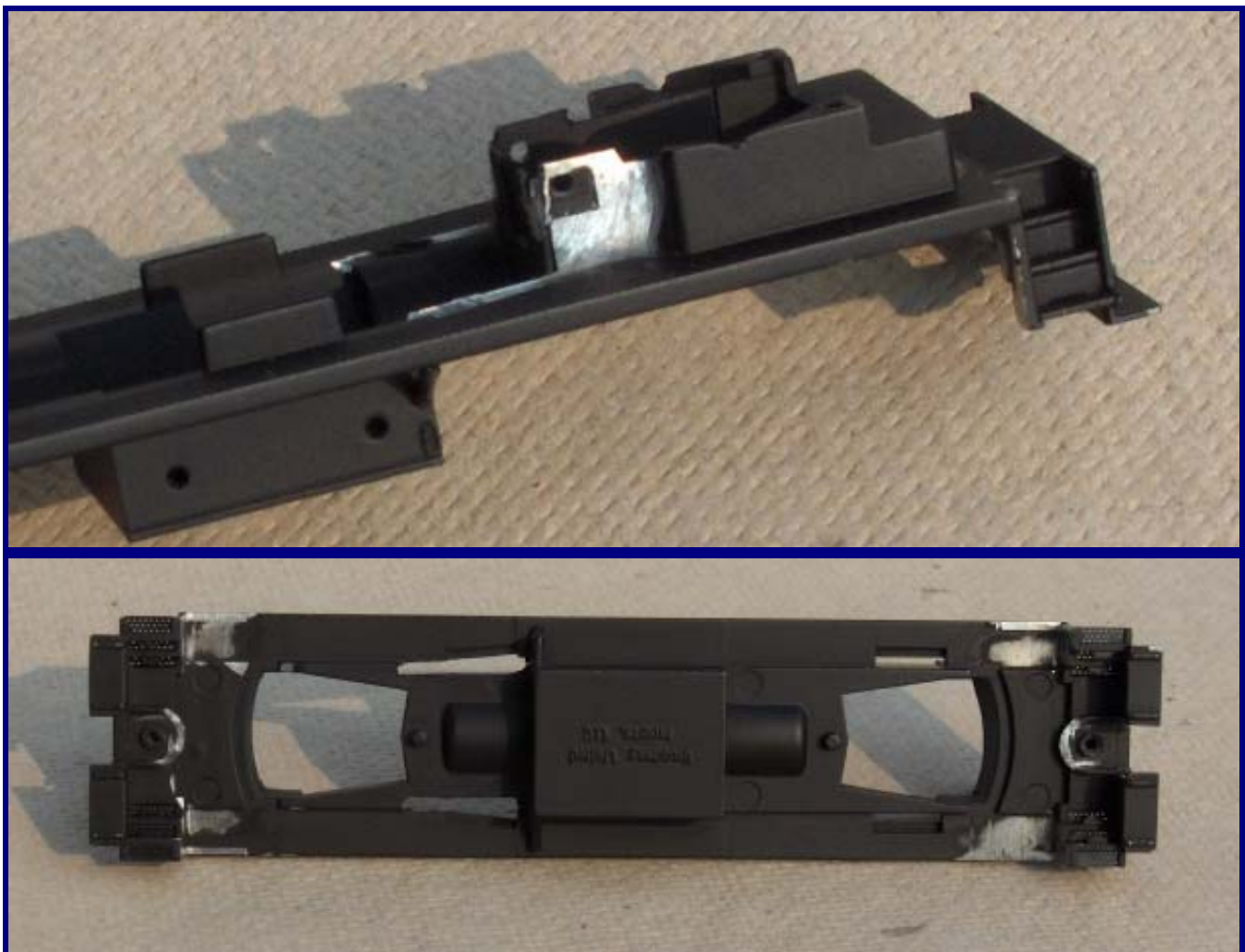
The next step is to start grinding and cutting to allow the Kato shell to fit on the BLI frame. I started with the frame and used a motor tool with a cut off disc. A milling machine would work better if you have one. Be sure to wear safety glasses as the discs are prone to snapping. Also, have a cup of water handy as the frame gets hot quickly. You may want to put some masking tape over the diamond tread on the deck to prevent a minor slip from scarring the deck.



In any event, be careful not to hit the deck while grinding. I learned this the hard way.



Grind off the small protrusions at the front and rear of the casting. Next is the hardest part of the whole process. Where the hood meets the cab a sheet metal bracket mounts to the frame to hold the circuit board. There are indentations for the bracket. The frame must be ground down flush with these indentations to prevent the narrow part of the hood from being spread. The only way I figured out to do this with a cut off wheel is to cut down into the frame also. This does not hurt the structure of the frame but be careful not to allow the slot to widen into the diamond tread area. While you have the grinder out, open up the coupler pockets cast into the frame to accept a standard rectangular Kadee pocket spring. You can also grind off the straight gussets at the step wells. I'll tell you more about that later in the article.



On the hood, remove the tabs that hold the shell to the frame. Also, trim away the back bulkhead at the narrow end of the hood. Take it right down to the sides. The rear porch requires some trimming on the inside to fit over a cast box on the frame. Glue all

three parts – hood, cab, and porch together. Be sure to get a good joint between the cab and hood. Once the joint has dried thoroughly (overnight at least) test fit and complete any final fitting and filing to get the shell to fit on the frame. The front of the hood will

have a nice, snug fit over the frame. That is all that will keep it in place later. The cab will be secured with screws. Be sure the back end of the porch is flush with the back step well.

Next, mount the circuit board back on the frame, place the stack assembly in the shell, and test fit everything again. Do not place the screws into the side of the frame to hold the sheet metal bracket that supports the circuit board in place. These will spread the shell. I had to file a bit off the bottom edge of the bracket to let it slide down to gain some extra clearance. Nibble out the plastic between the four slots in the shell where the stack hatch fits into the shell. This provides clearance for the volume potentiometer and jumper. It will be tight but everything should fit. If not, file and grind until it does.

Drill two clearance holes in the back corner of the frame to allow two screws to hold the rear portion of the shell in place. I used 2-56 screws. Cut and place

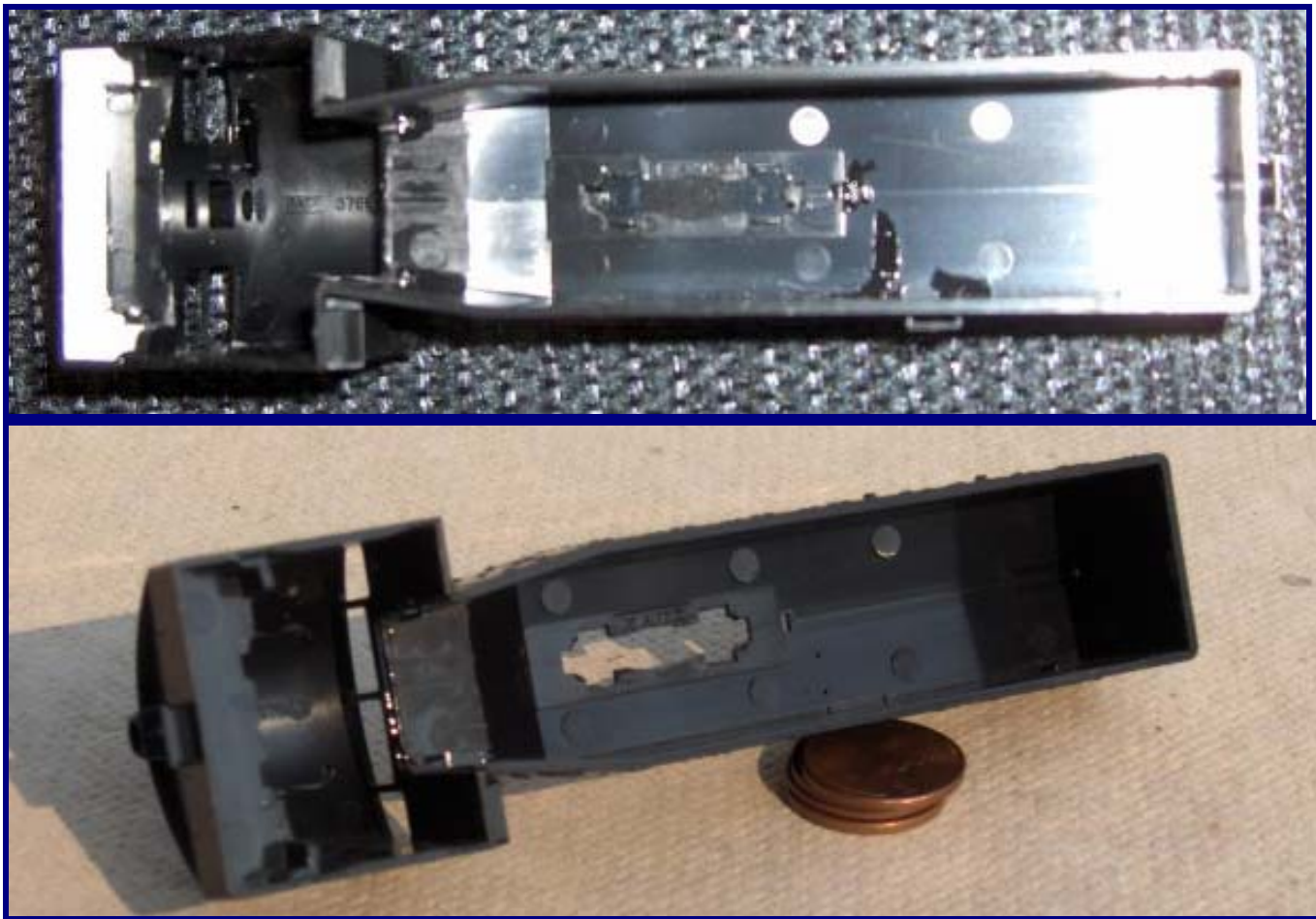
two styrene blocks in the back corners of the porch to correspond to the holes in the frame. Assemble everything to make sure the blocks clear then drill and tap the blocks. If things are misaligned, you can elongate the holes in the frame with a file. I know this for a fact. Make sure everything fits one more time.

As long as everything is together, this is a good time to test fit and trim the Kato cab interior. I did this as part of the final assembly, but it is easier to do it now and you do not have to worry about scarring the paint. To do this you will need to have the wiring plug from the BLI cab light/back-up light handy. Notice which two wires run from the plug to the back-up LED and cut these off near the PC board. You can cut the other two off closer to the plug unless you want to find some way to install a cab light. You could also use these for another lighting effect. Do not bother to wire the plug to the Kato LED now. Just plug it into the BLI circuit board.



Place the windows and cab interior in the shell and test fit the shell and frame together. You will find you have to trim some material off the bottom of the front window casting. Do this carefully. The clear plastic is brittle and will crack into the visible window area. You will also have to cut a small portion of the cab interior away at the front cabinet. Take away as little as possible and you will not be

able to see it once everything is put together. Also, mark the two brass strips Kato runs down the back bulkhead of the cab to get electricity to the back-up light even with the bottom of the cab wall and cut them off. They should project far enough below the cab floor to allow wires from the BLI plug to be soldered on later.



The next major step is replacing the straight gussets with the curved gussets. Start by grinding the straight gussets from the BLI frame. You can do a pretty fine job of this with a cut off wheel and dress it up with a jewelers file. Next, remove the curved gussets from the Kato deck. The deck on the Kato loco is a plastic piece and is not part of the frame, so it can be easily done. Also remove the jacking pads from the Kato deck. Glue the gussets onto the BLI frame with CA or epoxy and fill any gaps with body putty. Also glue the jacking pads onto the frame. I used CA for this process and had no problems with any of these breaking loose during assembly. Clean up the joints and re-putty until satisfied. The early NW2 did not have a handrail down to the gusset on each stairwell, so do not leave a hole in the gusset for these.

The final modification is to replace the handrails. The holes in the deck for the three-stanchion front handrail do not match the holes for the two-stanchion hand rail. I could not think of a simple way to replicate the diamond tread where the middle hole is, so I just filled the hole where the middle stanchion is with putty. Drill a hole near the front corner of the

deck and bend a piece of brass wire into the shape of the early handrail. Cut the mounting brackets (rectangular pads with four paws) from the stock handrails, drill a hole in the center, slide them onto the wires and mount the new handrails with CA. The rear hand rails on the early NW2 did not go down to the gussets on the stair well. They are just straight grabs on the corner of the porch. I used standard straight grabs for these with Tichy NBW castings. Complete the shell by placing the other handrails and details as indicated by the Kato directions. You can also use wire grabs if you prefer. I did not add any other details but you may add your favorites.

I used AccuFlex paints to paint the model. I added all plastic parts to the frame and shell (fuel tanks, bell bracket, etc.) before painting. I popped the truck sideframes from the trucks and washed them, the frame, the cab interior, and the shell in warm soapy water and scrubbed gently with a soft toothbrush. I then rinsed everything with alcohol. Do not use denatured alcohol as the denaturing agent can leave a residue once the alcohol evaporates. I gave everything a light coat of primer grey. This will really show any body putty work that needs to be



touched up. Use latex gloves while handling the primed model if you need to touch up any putty work. You do not want to get finger oils on the primer.

I used the primer grey as the cab interior color. You may have a different choice, but since the windows are so large, the cab interior does need to be painted. I just masked the interior off so the body color would not overspray onto the interior walls. I then painted everything with B&O Royal Blue (the truck sideframes appear to be black in the prototype photo). If you prefer a different shade of blue, something a little darker, feel free to use it. Once the paint is dry, hit the loco with a glossy finish to get better decaling.

I used Champ decal set EH-6D, B&O steam loco – deluxe gold, with the exception of one big mistake. The B&O used 8 inch numbers on the cabs until 1942. One source I have says the lettering on tenders was also 8 inches, another says 7, going to 5 inches in 1942 also. I used the large numbers on the cab side, but the 5 inch lettering on the hood side from the Champ diesel switcher set. **I should have used the larger lettering from the steam loco set.** I used the “D” and “S” from the set to put together the DS-4. The bottom stripe is 4½ inches wide and the hood stripe is 1¾ inches wide. The best I could do was Champ 4 inch deluxe gold stripes, S-19, and 2 inch deluxe gold, S-61. I used the top of the front grill as the starting point for the hood stripe, laying the stripe right over the top frame of the grill and keeping it level around the hood and cab. The builder’s plates are from Microscale set 87-134. They are not the correct plates but look close enough from any normal viewing distance.

I added some very light weathering while everything was apart because I did not want to hassle with

masking windows and wheels later and sprayed everything with Testors’Dullcote.

I next assembled the frame and all of its components and placed it on the test track. This would be a good time to program the loco. I found the BLI/QSI decoder to be fickle and had to reset it several times. This is much easier with the shell off. A programming booster helps, but I managed to get it done without one. Hopefully, you have had some experience with programming and the fickleness of the BLI/QSI decoders.

The last bit of construction is to wire the BLI back-up light plug to the Kato LED. You will notice the Kato LED has a resistor wired on the LED PC board but the BLI has the resistor built onto the decoder/sound board. Place a jumper over the Kato LED PC board resistor. Since LED’s have a polarity, use some jumper clips to determine the correct way to wire the BLI connector to the Kato back-up light PC board. You cannot harm an LED by hooking it up backwards, so if it does not light, switch the wires on the LED PC board. Be sure to have the headlight function on and the loco traveling in reverse or the LED may not light up at all. Once you have determined the proper polarity, cut the jumper wires to an appropriate length and solder them onto the brass strips from the Kato LED PC board. Leave the wires long enough to allow handling the shell comfortably after the connector is plugged into the BLI decoder.

Place some figures in the cab if you like, assemble the glass and cab interior, plug in the back-up light to the decoder, and place the shell on the frame. Run the two screws into the bottom of the porch, put the bell on, and there you go.

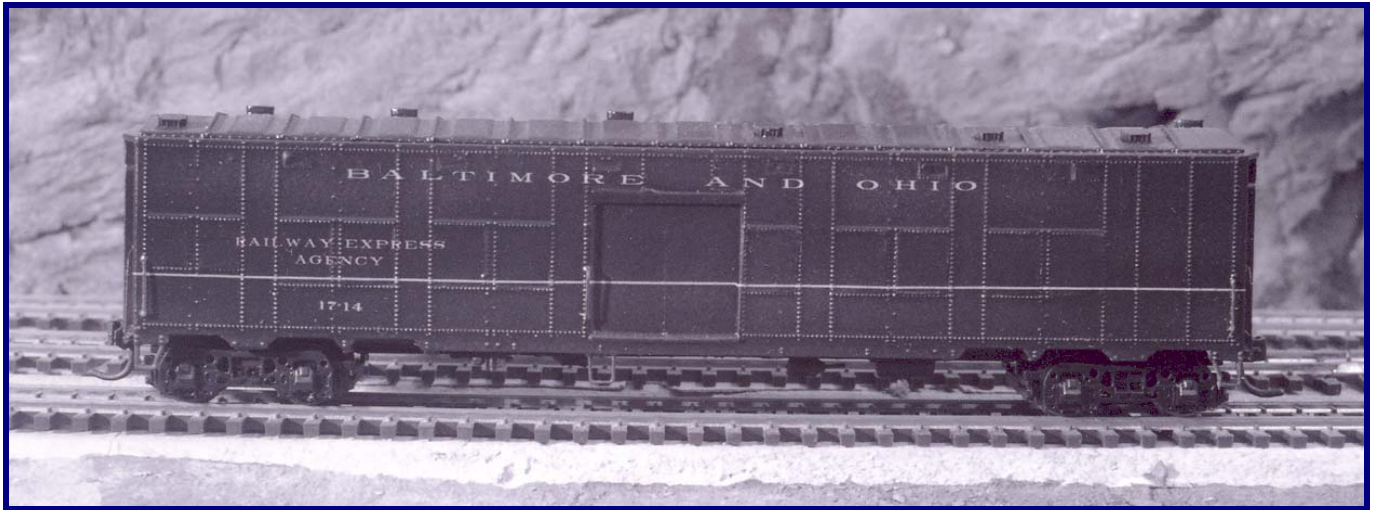


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# HO C-17 EXPRESS CAR CONVERSION FROM A WALTHERS TROOP SLEEPER

BY GREG M. SMITH

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



## The Prototype

After World War II the government had a large surplus of Pullman troop sleepers. Many railroads purchased these cars at bargain prices to convert to camp cars, m.o.w. tool cars, and express cars. The B&O purchased 100 (1700 – 1799) for express car service. In early 1950's, cars used in interchange service had their trucks changed from Allied Full Cushion to Bettendorf. These cars remained in service until 1970 and were converted to M.O.W. service or used for storage along the system. The current (Second Quarter 2006) Sentinel has extensive prototype information about these cars.

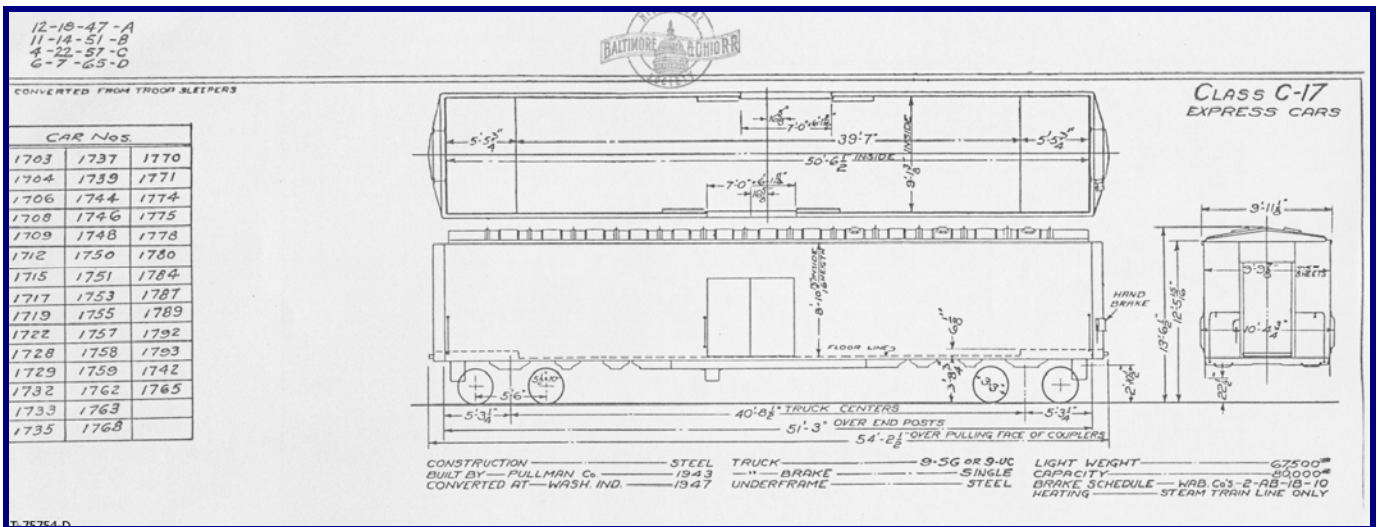
## The Model

Walthers released HO troop sleepers in the last year and with some time and care one can be converted into a good representation of the C-17 express car. My model was undecorated but a painted model can

work also since the B&O painted over the original lettering during their conversions.

The first step is to carefully remove the roof from the model which is held in place by four tabs on each side. Remove the interior and save for later projects. After the roof is off, remove the side for easy cutting and modification. You should see the tabs on the back side, so press down and out and the side will come off. Set the roof aside for there are no modifications needed on the model. As you can see in the picture (below) I had completed one side to compare with the original configuration of the side. All window and side vents will need to be covered and a freight door has to cut in. Few railroads cut the doorway to left like the B&O, most move their doors to the right. Why this was done is not clear but apparently did not make any structural difference in the car.

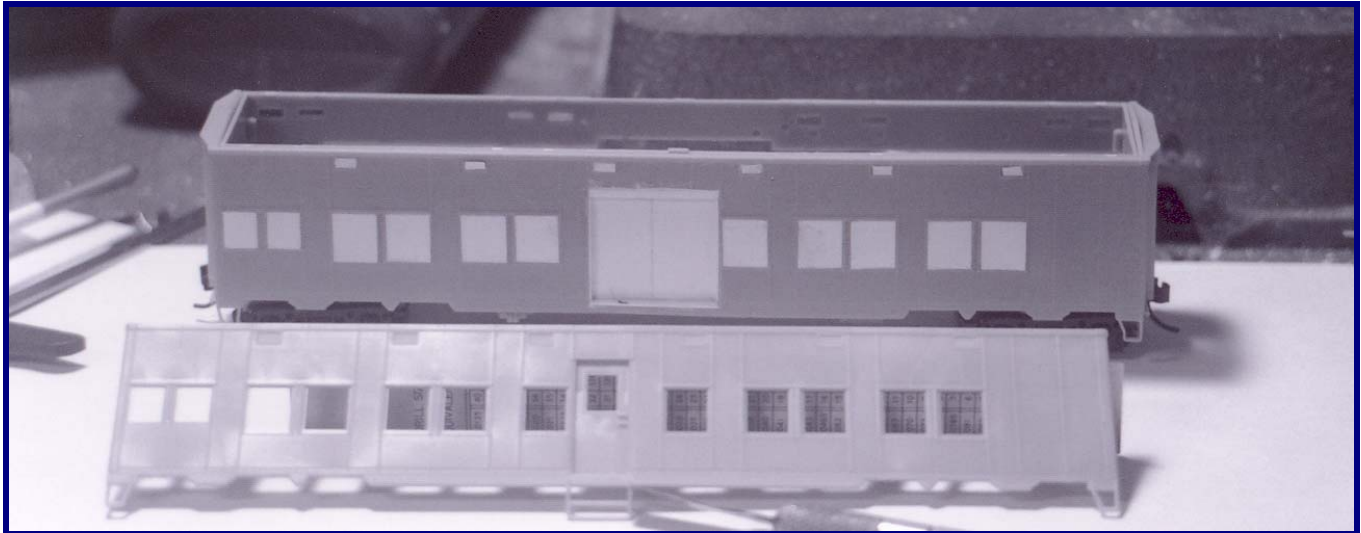




B&ORRHS Collection



B&ORRHS Collection



The doorway is seven feet wide according to railroad clearance diagrams; unfortunately there is no measurement for the height. Using pictures and counting rivets from the roof will give you an

estimate of the height. After I completed the modifications the doorway measured approximately six feet in height. Also remove the stirrup sets under the doorway. As you can see by the darkened section

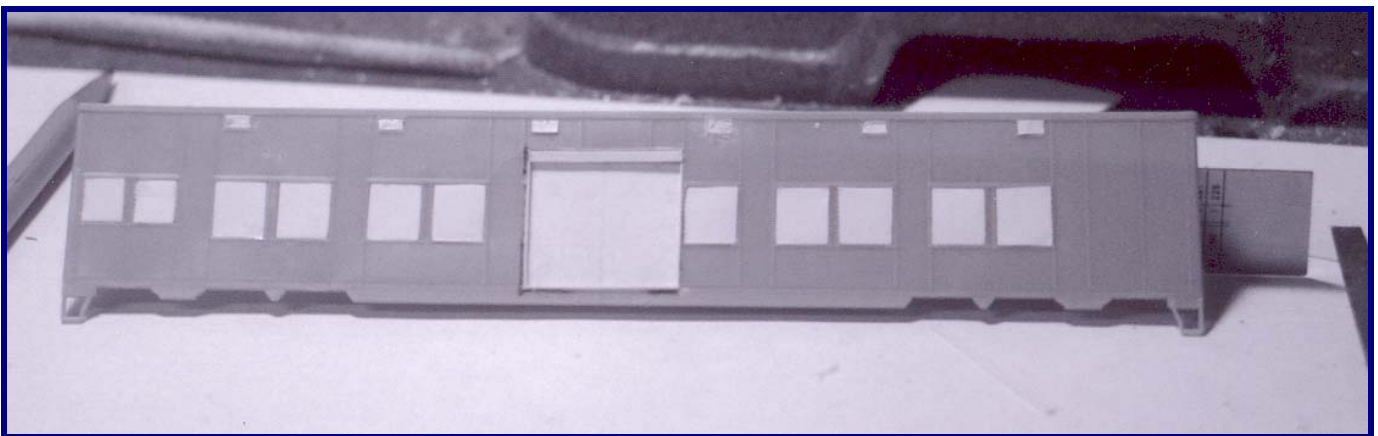
in the photo the model is cut left of the rivet line by the right single window. The door and the left single window are removed but be sure to leave the rivet line left of the left window. I used a fine razor saw

for most of the cuts and a hobby knife to cut clean square corners. I dressed all side with a file to smooth the finish.



Cover the windows with .010" styrene sheet cut to fit the window openings over the sashes. I used a Duplicate Cutter by NWSL to make strips the height of the windows. With a NWSL Chopper, I cut the strips to the window width. Since the cutting of styrene is not always square it is advised to cut a little large and file and sand for a true fit. Use liquid cement to secure in place. Using .005" styrene strips I covered the side vents. I made strips using the same methods as the window covers. Taking a plain piece of styrene, .020 thick, I made a door slightly larger than the opening with a line scribed down the center. This would represent the steel doors that opened and

closed from the inside. There were no handles on the outside of the door, but a latch approximately a foot above the door sill was there to secure the door with a metal seal. Gluing the door centered to the doorway is critical. Next glue a piece of 2" x 4" styrene strip to represent the door sill at the bottom of the door. Then glue 1" x 3" styrene strips to represent the door sides. And finally use a piece of 4" x 6" styrene for the doorway header. Use filler, if needed to dress up cracks. I find in small places, caulk works great to fill cracks and seams and can be washed off on places not needed.



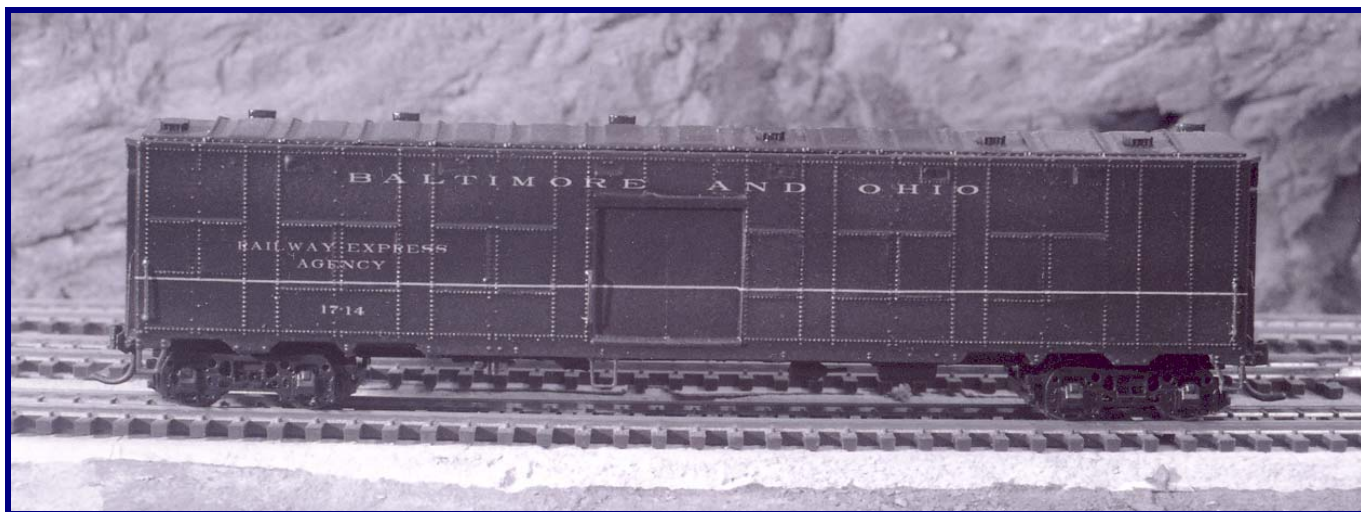
The next steps are the re-assembly of the car. First the interior support wall has to be cut to clear the new doorway. Measure carefully and cut only what is necessary. The door may set slightly below the floor so file the floor to clear the new door. I tapered the bottom of inside of the door so less had to be filed

from the floor. Snap the wall back in place and you may need to glue the top edges of the wall for solid construction. Do not attach the roof until painting is completed and end door glazing is completed. Add grab irons and side strip steps, which are A-Line #29000. Most of the grab irons come with the

Walther Car. You may want to add additional weight according to your standards.

The final step is painting, glazing, and decals. Wash and dry you model to get dirt and body oil off. I painted my model with Model Flex B&O Royal Blue, #16-67. Everything except the underframe should be blue. The underframe and trucks are black. In later years the trucks were painted blue to save time and money. Decals for this project were Microscale #87-

797 Passenger Car Lettering and #87-798 Passenger Car Strips. Glaze the end doors and attach the roof. Since modifications have been made the roof may need to be glue to have a tight fit. Dry test fit the roof first to see if everything fits tight. My model is not weathered at this time but I plan to weather the roof and lightly dust the trucks, sidesill and underframe. Even though these cars were washed frequently it did not take them long to get road dust and steam engine droppings.



## Bill of Materials

A-Line

Stirrup Steps, #29000

Evergreen Scale Models

8103 HO Scale Styrene Strip – 1" x 3"

8204 HO Scale Styrene Strip – 2" x 4"

8406 HO Scale Styrene Strip – 4" x 6"

Microscale

Passenger Car Lettering, #87-797

Passenger Car Strips, #87-798

Modelflex

B&O Royal Blue, #16-67

Black

Walthers

Pullman-Standard  
Undecorated, #4150

Troop

Sleeper,



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## O SCALE MODELS AT THE STAUNTON CONVENTION

BY EDWARD F. BOMMER

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



### Introduction

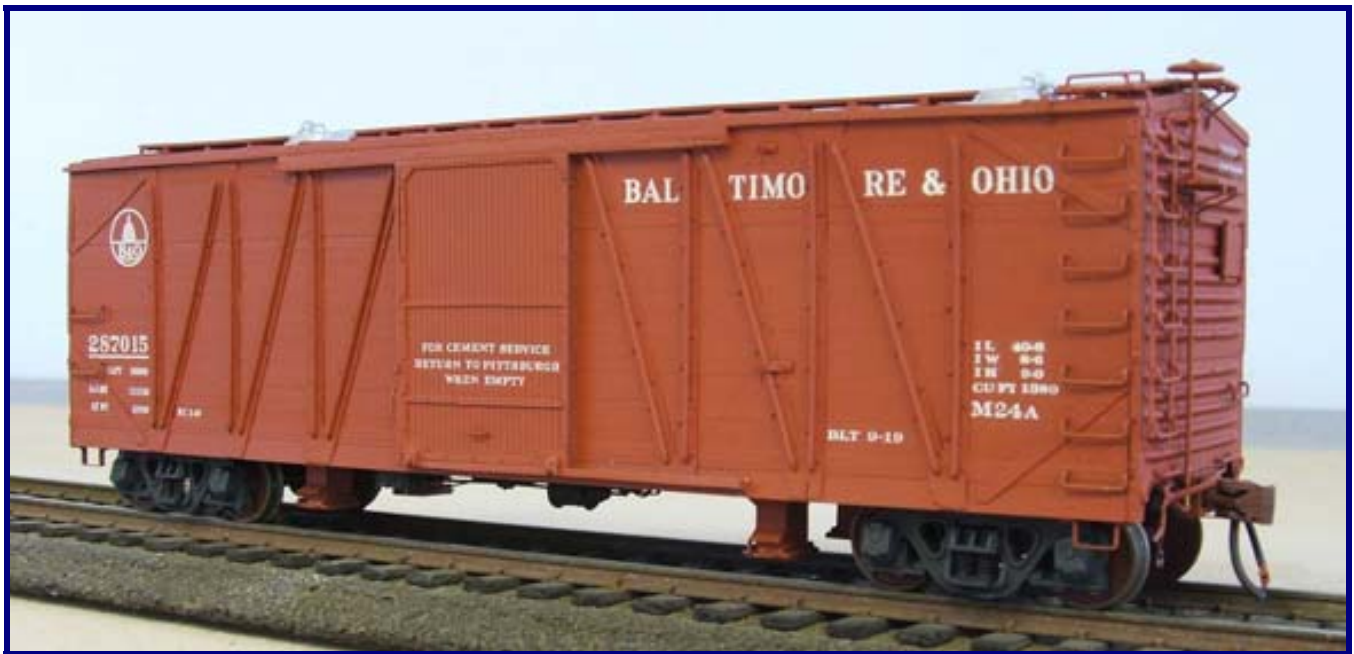
Your *B&O Modeler* Editor asked for more information regarding the three O scale convention models that appeared in the November/December issue. Here are photos and some information about each of them. All three were built by the author.

### Snow Flanger 43

The O scale snow flanger (lead photo) was rebuilt in 1994 from a 1950 Train Craft No. 403 tool caboose. That model was found to have the same basic dimensions as a B&O M-8 class box car, from which the prototype flanger was made. Original kit parts in this model are the door castings, roof, floor and car ends; one of which was modified for the front window.

New sheathing, sides and built-up under-frame were made, along with full brake rigging and piping. All Nation arch-bar trucks were fitted with leaf springs. One truck was fitted with the plow, which is scratch-built in brass, following B&O drawings on pages 6 and 11 of the November-December 1992 issue of "The Sentinel."

This car is able to operate within a train as well as being pushed ahead of a locomotive. The working headlight was made from brass tubing. More information is needed for detailing the interior of this car, which so far only has a stove in it. Floquil paint, Champion decals and chalk weathering was applied. Won First Place, Non-Revenue equipment.



### M-24a Cement Service Boxcar

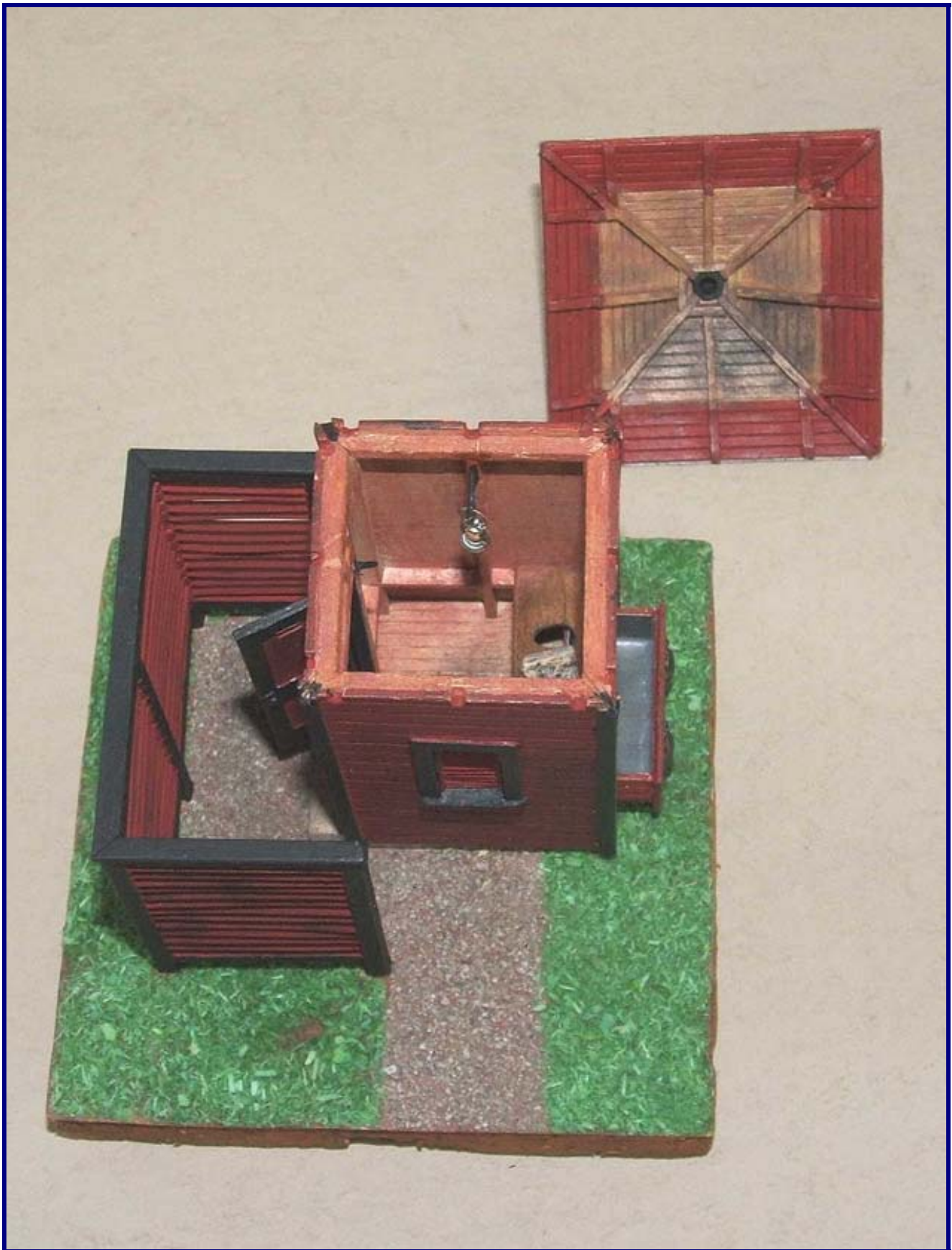
This O scale M-24a cement hopper box car above was built in 2002 from a “Chooch” USRA outside-braced box car kit produced in 1985. Information on revising and detailing the model came from a modeling article published in *The Sentinel*, Fourth Quarter 2000 pages 21-26. More information about these cars appeared in the First Quarter 2003 issue, pages 32-33.

The kit basically consisted of four cast resin parts and two cast metal ends. The resin parts had become

seriously warped over the years. They were warmed in an oven and carefully straightened. Broken or missing details on them were re-fitted in styrene. To get the correct number of roof panels, cast-on details were removed and replaced with styrene strips. The hoppers and hatches are scratch-built in styrene with thin sheet aluminum and wire for details. The hatches each contain 14 parts and each hopper has 16. Full brake rigging and piping details were applied. Lettering was done with Champion decals over Floquil paint. Won First Place, Freight Cars.







**B&O Standard Plan Privy**

In response to the Editor's invitation on page 22, the First Quarter 2005 issue of "The Sentinel," this B&O privy was built in September 2005 following the original 1906 plans. It is built in wood and styrene, fully framed and sheathed. The structure can be taken off the concrete foundation, which is back-filled with screened cinders dug from the Jersey Central engine terminal at Commuipaw in 1956. The building has a working door made of styrene and a removable waste box in wood that is sheet-zinc lined like the

prototype, using a piece of an old, Multi-Lith off-set master. The roof top vent was turned from styrene rod, following a B&O drawing for the cast iron prototype. The privacy screen has a wood frame with styrene strips inserted for the louvers. The structure was brush painted and weathered with chalks. A coat hook, kerosene lantern, "Sears" catalog and a varnished, two-hole seat complete the interior details. Won First Place, B&O Privy Contest.

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## **PLANNED FOR THE NEXT ISSUE**

**HO B&O Class N-43 Covered Hopper  
Modernized, Streamstyled HO 10-1-2 Sleeper  
Modeling B&O Hoppers in HO Scale**

## **TOPICS IN NEED OF COLLABORATION FOR FUTURE ISSUES**

(CONTACT THE EDITOR TO ASSIST WITH ARTICLES ON THESE TOPICS)

**C-16 Cabooses  
N-41 Hoppers  
O-39 Coke Gondolas  
Ilchester Station**

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